App. Ser. No. 09/915,184 Atty. Docket No. P1292

IN THE SPECIFICATION

Please amend paragraphs 70 and 73 of the application as follows:

[0070] Reference is now made to Fig. 1A wherein there is shown a lensed fiber end 10 or tip comprising a biconic lens 12. The lens is formed on the fiber using special processing steps to form the curvatures of the lens surfaces and has a shape similar to a weather pyramid. The biconic lens 12 has curvatures that are different in orthogonal directions as depicted in Figs. 1B and 1C. In one orthogonal direction, as shown in Fig. 1B, a first radius of curvature 11 in is 14 μm whereas in the other orthogonal direction a second radius of curvature 13 is 8 μm, with a tapered angle Θ_1 of about 50° to 55°. Such a lens is also shown in concurrently-filed co-pending U. S. patent application Serial No. 09/915,186 ~~09/_____~~, entitled LENSED OPTICAL FIBER by Edmund L. Wolak, Lei Xu, Robert Lang, and Tae J. Kim (Attorney Docket No. P1345) which is assigned to the assignee herein and is incorporated herein by its reference. The larger radius in the plane of the lens may be, for example, around 12-22 μm while in the side elevation orthogonal to this plane the radius of curvature may be, for example, around 5-10 μm. As set forth in application Serial No. 09/915,186 ~~09/_____~~, the biconic lens provides for improved coupling efficiency compared to a chisel or wedged-shaped fiber lens. The use of a biconic lens 12 has shown to reduce the change in the laser diode monitor output of laser monitor 15 (Fig. 2A), for example, a monitor photo diode (MPD), due to a difference in the level of reflected light feedback employing a biconic lens over a chisel or wedged-shaped lens. Monitor photo diodes can be avalanche diodes and PIN photodiodes, among others. The biconic lens has a continuous curved surface whereas the use of a chisel lens has some locally nearly flat surfaces that can provide some feedback reflection. With the use of a biconic lensed fiber input end, there is less feedback of reflected light back into the laser diode cavity. Also, an AR coating is preferably applied to the biconic lens surface to reduce its reflection capabilities in the range of wavelengths produced in the laser diode output.

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[0073] Reference is now made to Fig. 2B, which illustrates an angled chisel type lens 32, such as is discussed in U. S. patent 5,940,557, incorporated herein, on a fiber end 30. As shown in Fig. 2B, the axis of lens 32 is angled with respect to the normal of the center axis 34 of fiber end 30. In the example here, the angle Θ_2 from the normal to the fiber longitudinal or optical axis 34 may be around 8°, which is exaggerated in Fig. 2B for purposes of illustration. The chisel lensed fiber input end 30 is shown in Fig. 2B with its central axis 34 aligned with the axis 18 of laser cavity 21. However, as shown in U. S. patent 5,940,557, the axis 18 of laser diode 16 may be aligned at an angle relative to the axis 34 of the fiber end 30. As previously mentioned, an AR coating is preferably applied to the surface of ~~biconic~~ chisel lens 32 to reduce its reflection capabilities.

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